

Customer 25280

RECEIVED
CENTRAL FAX CENTER

Case 5113D

APR 02 2007

REMARKS

Claim 58 has been amended. Claims 1, 3-35, 38, 40-49, 58-72, 77-79, 81-85, 88-97, 99, 100, 102-128, 130, 131, 134-136, 138, 141, and 151 are pending. Claims 2, 36-37, 39, 50-57, 73-76, 80, 86-87, 98, 101, 129, 132-133, 137, 139-140, and 142-150 were previously cancelled without prejudice or disclaimer.

The invention is directed towards a dimensionally stable cushioned carpet tile suitable for disposition as discrete modular units across a flooring surface. Exemplary constructions of the claimed carpet tile construction are illustrated and described in relation to any of FIGS. 3A-C, 6A-B, 7A-C, 8A-B, 9A-B, for example.

The carpet tile comprises a primary carpet having a pile side and a primary base with a plurality of pile forming yarns projecting outwardly from the pile side. Referring, for example, to FIGS. 3A-C, the carpet layer comprises a pile forming primary carpet fabric 112, which may incorporate either a tufted or bonded configuration with loop and/or cut pile.

A rebond foam cushion layer comprising at least one preformed rebond foam sheet is disposed at a position below the primary carpet fabric. The rebond foam cushion comprises foam chips and binder represented in the figures as X78 (where X varies from figure to figure) and is described, for example, on pages 34 and 35 of the specification. The rebond foam cushion may be polyurethane rebond foam cushion comprising polyurethane foam chips and binder.

Also claimed is a reinforcing material flame laminated to the rebond foam. The reinforcing material and the flame lamination is shown, for example, in Figure 31.

In one embodiment, a bridging composite is claimed extending in bonding relation substantially between the primary base and the upper surface of the rebond foam cushion layer. The bridging composite consists essentially of a layer of stabilizing material having a first side and a second side, a first layer of at least one resilient adhesive extending away from the first side of the stabilizing material into contacting relation with the primary base. The second side of the

Customer 25280

Case 5113D

layer of stabilizing material is flame laminated to the upper surface of the rebond foam cushion layer such that the layer of stabilizing material is bonded between the first and layer of resilient adhesive and the rebond foam cushion layer.

In some embodiments, a backing material is claimed attached to a lower side of said rebond foam cushion layer and is shown as X70 in the Figures. In one embodiment, the backing is at least one of a woven and nonwoven textile material.

Claims 1, 3, 4, 7-17, 19-25, 27-35, 40-42, 44-48, and 151 were rejected under 35 U.S.C. 103(a) as being unpatentable over Higgins (US Patent 4,522,857) in view of De Simone et al. (US Patent 5,610,207) and Official Notice.

Claims 5, 18, and 43 were rejected under 35 U.S.C. 103(a) as being unpatentable over Higgins (US Patent 4,522,857) in view of De Simone et al. (US Patent 5,610,207) and Official Notice in further view of Dow (EP 048 986).

Claims 6, 26, 38, 49, 58-60, 62-67, 69-72, 77-79, and 81-85 were rejected under 35 U.S.C. 103(a) as being unpatentable over Higgins (US Patent 4,522,857) in view of De Simone et al. (US Patent 5,610,207) and Official Notice in further view of Higgins (US Patent 5,540,968).

Claims 61 and 68 were rejected under 35 U.S.C. 103(a) as being unpatentable over Higgins (US Patent 4,522,857) in view of De Simone et al. (US Patent 5,610,207), and Official Notice in further view of Higgins (US Patent 5,540,968), in further view of Hamilton (US Patent 5,616,200).

Claims 88-97, 99, 100, 102-128, 130, 131, 134-136, 138, and 141 were rejected under 35 U.S.C. 103(a) as being unpatentable over Higgins (US Patent 4,522,857) in view of De Simone et al. (US Patent 5,610,207) and Official Notice.

Most claims were rejected under 35 U.S.C. 103(a) as being obvious over U.S. Patent 4,522,857 to Higgins (Higgins '857) in view of U.S Patent 5,610,207 to De Simone (De Simone) and Official Notice either as a stand alone combination or further in view of various supplemental art. Continued rejection

Customer 25280

Case 5113D

on these grounds is respectfully traversed and reconsideration is requested at this time in light of the present amendments and remarks.

Applicants note that, as amended, all claims specifically recite a carpet tile having a flame laminated backing composite or a flame laminated cushion back composite. As shown, for example, in Fig. 31, a flame laminated backing composite includes, for example, glass, rebond foam, and felt layers with flame laminated junctions therebetween. With respect to, for example, Figs. 15A, 15B, 19A, 19B, 20, 32, and 37, exemplary carpet tiles may include a flame laminated backing composite of a reinforcement or stabilizing material, such as glass, a rebond foam layer such as a preformed sheet of rebond foam, and a backing, such as felt, formed by flame lamination of the glass and felt to the foam.

Although Applicants do not traverse that flame lamination has been used for other textile applications other than carpet tile in the past. Applicants traverse the use of Official Notice of the general proposition that flame lamination is a well known method of bonding foam and fabric layers, that Applicant agreed to this, that it makes the flame lamination of a glass mat to a rebond foam layer obvious when the references does not disclose flame lamination and teach away from flame lamination, that it does not matter that it is used in a carpet tile, and the like.

In the Remarks of the last response, Applicants did not agree that flame lamination is "a well known method of bonding foam to fabric layers". Applicants stated that "flame lamination has been used for other textile applications other than carpet tile". Applicants did not say that flame lamination was well known or that it was used for bonding foam to fabric layers. Applicants did say it was not used in carpet tile. The claimed invention is carpet tile. The flame laminated backing composite of the present invention includes a rebond foam layer and at least one of a reinforcing material and a backing material. Applicants did not say that flame lamination was well known in tile, in backing composites, in backing composites for tile, or the like. Applicants believe that there is no motivation or suggestion in Higgins '857 or De Simone '207 to use flame lamination much less a flame laminated composite backing in a carpet tile.

Customer 25280

Case 5113D

As regards the rejections based in whole or in part upon the combination of U.S. Patent 4,522,857 to Higgins in view of U.S. Patent 5,610,207 to De Simone, as best understood, the fundamental rationale for the rejections is that it would have been obvious to one of skill in the art to substitute a rebond foam material as taught by De Simone '207 for the foam layer in Higgins '857.

Claims 1, 41, 58, 88, 123, 130, and 134 call for a preformed sheet of rebond foam cushion, rebond foam, compressible foam particles, foamed polyurethane particles, or bonded chips. In at least one preferred flame laminated embodiment, a preformed rebond foam sheet has glass joined to one surface and felt joined to the opposing surface. De Simone '207 does not appear to disclose flame lamination of a preformed sheet of rebond foam. In contrast, De Simone '207 appears to be directed to forming a re-bonded foam in-situ by mixing pieces of foam with liquid polyol and liquid polyisocynate. Hence, De Simone '207 appears to teach away from the claimed invention.

De Simone '207 does not disclose a preformed rebond foam sheet flame laminated to a reinforcing or backing material. A preformed rebond foam sheet requires an adhesive layer or flame lamination to join or bond it to adjacent layers.

Further, as best understood by Applicants, De Simone '207 is not directed to carpet tile. Also, it appears that De Simone '207 is not directed to attached cushion broadloom carpet. It appears that De Simone '207 is directed to low density recycled foam pad. Column 2, lines 40 – 45 of De Simone '207 appear to refer to making a tri-laminate pad with a central layer of foam pieces and upper and lower layers of preferably polyurethane foam but which could be natural or synthetic materials, like metal, wood, and woven or unwoven fabrics, eg. "carpet backing" but which are preferably polyurethane foam. Typical carpet backing fabrics are jute or polypropylene. It is believed that De Simone '207 is directed to making pad or underlayment for use with separate, unattached broadloom carpet rather than for making attached cushion broadloom (roll goods) and is in no way directed to making carpet tile. Applicants believe that the reference to "carpet backing" in De Simone '207 is an example of woven or unwoven fabrics rather

Customer 25280

Case 5113D

than to putting the recycled foam pieces of De Simone '207 on the back of carpet. De Simone '207 does not state "carpet". It states "carpet backing" as an example of fabric. It is known in the rebond pad industry to put a scrim on a rebond foam pad or underlayment. Applicants respectfully believe that De Simone '207 is directed to unattached pad or underlayment rather than to attached cushion broadloom. None of the Examples in De Simone '207 appear to have an upper or lower layer of fabric, much less carpet. The upper and lower layers in the Examples of DeSimone '207 appear to be foam layers. Hence, De Simone '207 is not directed to carpet tile, does not enable rebond foam backed carpet tile, and does not enable rebond foam backed broadloom carpet.

Further, as De Simone '207 is not directed to carpet tile or even attached cushion broadloom carpet, neither De Simone '207 nor Higgins '857 provide the necessary motivation or suggestion for combination or for substituting the recycled foam of De Simone '207 for the foam layer of Higgins '857. As described earlier, it would not have been obvious to substitute rebond foam for the virgin foam in a carpet tile. It would have been even less obvious to substitute low density rebond foam for virgin foam. Further, it is not obvious to combine pad or underlayment art (De Simone '207) with freelay carpet tile art (Higgins '857) as carpet tiles, especially freelay carpet tiles, are required to be dimensionally stable.

As one of skill in the carpet tile art would readily understand, changes to a dimensionally stable carpet tile structure, even one layer in a stable structure (such as a freelay tile like Higgins '857), are not taken lightly, are viewed with skepticism, and are not done by even experts in the carpet tile art to save money, reduce mass, or the like (see Norton declaration).

Prior to the present invention, carpet tiles were known and rebond foam pads were known but those skilled in the carpet tile art did not use rebond pad in carpet tiles. One of skill in the carpet tile art would not substitute rebond foam pad (low density recycled foam of De Simone '207) for the foam layer in a carpet tile. One of skill in the carpet tile art would not look to De Simone '207 for motivation or suggestion in modifying the Higgins '857 carpet tile structure.

Customer 25280

Case 5113D

Still further, the Higgins '857 carpet tile effectively has two stabilizing layers (layers 18 and 26). As Higgins '857 is directed to a stabilized, freelay carpet tile, one of skill in the carpet tile art would not remove one of the stabilizing layers. One does not make changes to a stable carpet tile structure in light of the many tile failures over the years, changes in one layer can effect the dimensional stability of the tile (cause cupping and curling, delamination), and the like. Adding a layer or substituting a new material for a layer can have a devastating instantaneous or latent effect on a carpet tile, especially a freelay carpet tile.

Applicants respectfully submit that the proposed combination of references in the rejections are inconsistent with the teachings of the cited art when considered in the context of the accepted wisdom held by those of skill in the art at the time the current application was filed. Thus, the conclusion by the Patent Office appears to not be supported by what the skilled person would have been motivated to do (or to not do).

As noted at MPEP §2142, to reach a proper determination under 35 U.S.C. 103, the Examiner must step back in time and into the shoes worn by a person of ordinary skill in the art when the invention was unknown and just before it was made. In view of all factual information, the Examiner must then make a determination of whether or not the claimed invention as a whole would have been obvious at that time to that person. Impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art. Certainly, Applicants recognize that any judgment of obviousness is in some sense necessarily a reconstruction based on hindsight reasoning. However, such reconstruction may take into account only knowledge that was within the level of ordinary skill in the art at the time the claimed invention was made. See, MPEP §2145(X)(A).

The ultimate determination of patentability must take into account the entire record. The decision is based on the legal standard of "a preponderance of evidence." With regard to rejections under 35 U.S.C. 103, the Examiner must provide evidence which as a whole shows that the legal determination of obviousness is more probable than not. See, MPEP §2142.

Customer 25280

Case 5113D

Thus, the essential query centers on what a person of skill in the art having the benefit of the cited references but without the benefit of the present application would have considered obvious at the time the invention was made. If the preponderance of the evidence does not weigh in favor of finding that the claimed invention would have been obvious to such a person, then the rejection cannot be maintained.

In his declaration, Mr. Norton notes that in actual practice, despite an interest in reducing material costs for the tile disclosed in the Higgins '857 patent, the density was maintained at about 16 pounds per cubic foot due to concerns over cushion quality and the effect on dimensional stability, long term durability and installation performance. Thus, the Office Action's proposed substitution of the low density foam pad of De Simone '207 for the high density foam layer of Higgins '857 would be inconsistent with actual historical design practices.

The earlier filed declarations establish the accepted wisdom in the art that rebond foam would not be suited for carpet tiles. As noted at MPEP §2145, proceeding contrary to accepted wisdom is evidence of nonobviousness. In addition, Mr. Norton's declaration outlines numerous perceived disadvantages of rebond foam and the De Simone '207 rebond foam material that would weigh against their use in the manner proposed by the Office Action.

In view of the fact that the carpet tile of the Higgins '857 patent is specifically stated to be suitable as a freelay commercial carpet tile, it is respectfully submitted that the evidence of record weighs particularly heavily against the conclusion that the modification proposed by the Office Action would be obvious. In this regard, Applicants note that the data in De Simone '207 actually weighs against the proposed modification since it would be considered to place dimensional stability at risk. Applicants further note that there is no indication in De Simone '207 that the rebond foam as described can be placed in a carpet tile. The design requirements for carpet tile are particularly rigorous due to concerns over dimensional stability and the like. Thus, it is respectfully submitted that the data in De Simone '207 showing reduced physical

Customer 25280

Case 5113D

performance characteristics actually weigh against the proposed placement of rebond foam in a carpet tile.

In order to reach the invention as claimed in at least certain claims, the cited Higgins '857 structure would not only have to be modified to incorporate a rebond foam cushion but would also have to be modified to eliminate one of the stabilizing layers, to add a backing material, to add a quick release backing, to add a flame laminated backing composite, and the like. Applicants respectfully submit that such a major redesign weighs even further against the proposed modification and in favor of patentability.

If the evidence is properly considered in its entirety, Applicants respectfully submit that there can be no reasonable determination that the preponderance of such evidence weighs in favor of obviousness. Unless the preponderance of evidence weighs in favor of a conclusion of obviousness, the claims must be allowed. The evidence of record establishes the accepted wisdom in the art that rebond foam would not be suited for carpet tiles. The evidence also shows that one of skill in the art would have considered the proposed modification of the carpet tile in Higgins '857 to be problematic since the tile being modified is intended to be suitable as a freelay commercial tile. The evidence further establishes that the data in the cited De Simone '207 reference would have actually provided a disincentive to the proposed modification. In light of such evidence, as well as copying by others, Applicants respectfully submit that the conclusion of obviousness cannot be maintained and that such a conclusion is based on impermissible hindsight and is in contradiction to the controlling standards of patentability.

As described in the declarations, it would not have been obvious for one of ordinary skill in the carpet tile art to use the rebond foam material of De Simone '207 in a cushion back carpet tile, and contrary to the position taken by the Office Action, one of skill in the art would not have been motivated to substitute the foam layer in the tile disclosed in Higgins '857 with the rebond foam materials from De Simone '207.

Customer 25280

**RECEIVED
CENTRAL FAX CENTER**

APR 02 2007

Case 5113D

In addition to the deficiency in the teachings of De Simone '207, it is also respectfully submitted that the references fail to disclose and teach away from a carpet tile with a flame laminated backing composite, much less a flame laminated backing composite including a reinforcement layer, a rebond foam layer, and a backing.

The other art relied upon in addition to Higgins '857 and De Simone '207 or Higgins '968 fail to make up for the lack of teaching in De Simone '207.

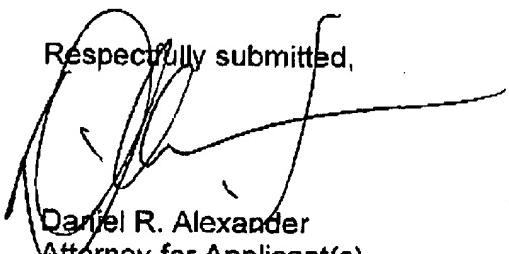
Accordingly, reconsideration and withdrawal of all outstanding rejections is requested at this time.

Conclusion

For the above reasons, Applicants respectfully believes the present application to be in condition for allowance. In the event that there are additional fees associated with the submission of these papers, Applicants hereby authorizes the Commissioner to withdraw those fees from our Deposit Account No. 04-0500.

April 2, 2007

Legal Department
Milliken & Company
920 Milliken Road (M-495)
P.O. Box 1926
Spartanburg, SC 29304

Respectfully submitted,

Daniel R. Alexander
Attorney for Applicant(s)
Registration Number 2,604
Tel # (864) 503-1372